

LISTING OF THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier.

Claims 1-25 (Canceled).

26. (Previously Presented) A method of enabling two aircraft components to be joined together, said method including the steps of

providing a first aircraft component having a surface to be joined to a corresponding surface of a second aircraft component, said first and second components being so shaped that if joined there would be a gap defined between said surfaces of said first and second components,

providing a resin infusion system comprising a source of resin,

effecting flow of said resin from said source of resin into said gap by means of suction, thereby substantially filling said gap with resin, and

curing said resin,

wherein the flow of the resin out of the gap is restricted by means of a barrier and at least a part of the barrier is formed by a surface of said resin infusion system.

27. (Previously Presented) A method according to claim 26 wherein said surface of said resin infusion system is provided by a moulding tool.

28. (Previously Presented) A method according to claim 26, wherein said barrier is, during the filling of said gap with resin, removably fixed in position relative to said first aircraft component.

29. (Previously Presented) A method according to claim 28, wherein said barrier is fixed to said first aircraft component by means of a pressure difference.

30. (Previously Presented) A method according to claim 29, wherein a single vacuum pump is used both to cause said pressure difference and to provide the suction that draws said resin into said gap.

31. (Previously Presented) A method according to claim 26, wherein said resin is cured while between said first aircraft component and said barrier.

32. (Previously Presented) A method according to claim 31, wherein after said resin is cured said first component and said barrier are separated.

33. (Previously Presented) A method according to claim 26, wherein a surface of said first aircraft component is prepared so that adherence of said resin to said surface of said first aircraft component is improved, a surface of said barrier is prepared so that the adherence of the resin to said surface of said barrier is reduced to facilitate separation of said barrier from said resin once cured.

34. (Previously Presented) A method according to claim 26, wherein the method includes a step of joining said second aircraft component to said first aircraft component, after said resin has cured.

35. (Previously Presented) A method according to claim 26, wherein a filter is provided to hinder flow of said resin out of said gap.

36. (Previously Presented) A method according to claim 26, wherein said first aircraft component includes at least one aperture arranged so that the suction is provided via said at least one aperture.

37. (Previously Presented) A method according to claim 34, wherein said resin enters said aperture, and the method includes a step of remachining said aperture after said resin has cured.

38. (Previously Presented) A method according claim 26, wherein the curing of said resin is effected by cold curing.

39. (Previously Presented) A method according to claim 26, wherein said first aircraft component is formed of a composite material.

40. (Previously Presented) A method according to claim 26, wherein said cured resin forms a shim.

41. (Previously Presented) A shim forming apparatus including a moulding tool having a surface shaped to receive a first aircraft component such that a gap is present between the surface of said moulding tool and said first aircraft component, said surface of said moulding tool being shaped to correspond to a surface of a second aircraft component, the apparatus further including a resin infusion system including a suction pump and a source of resin, the apparatus being so arranged that in use said gap between the surface of the moulding tool and said first aircraft component is filled with resin to form a shim.

42. (Previously Presented) A shim forming apparatus according to claim 41, wherein said moulding tool has a portion that in use is able to sealingly engage with a portion of said first aircraft component, to define a sealed region, which is connectable to a suction pump so that in use suction is applied to said sealed region, thereby holding said first aircraft component in a fixed position relative to said moulding tool.

43. (Previously Presented) A shim forming apparatus according to claim 41, wherein the apparatus further includes a vacuum bag that is attachable to said moulding tool and which, in use, enables suction to be applied to said moulding tool to draw resin from said resin source into said gap.

44. (Previously Presented) A moulding tool suitable for use in a shim forming apparatus, said moulding tool having a surface shaped to receive a first aircraft component such that a gap is present between said surface of said moulding tool and said first aircraft component,

said surface of said moulding tool being shaped to correspond to a surface of a second aircraft component, said moulding tool being so configured that it may be arranged so that, in use, a gap formed between said surface of said moulding tool and such a first aircraft component is filled with resin to form a shim.

45. (Previously Presented) A method of joining two aircraft components together, said method including the steps of

providing a first aircraft component formed of a composite material having a surface to be joined to a corresponding surface of a second aircraft component formed of a composite material, said first and second components being so shaped that if joined there would be a gap defined between said surfaces of said first and second components,

providing a resin infusion system comprising a source of resin,

placing said first aircraft component against a surface of said resin infusion system,

effecting flow of said resin from said source of resin into said gap by means of suction, thereby substantially filling said gap with resin, the flow of the resin out of the gap being restricted by means of a barrier, at least a part of said barrier being formed by a surface of said resin infusion system, and said barrier and said first aircraft component being, during the filling of said gap, removably fixed in position relative to each other by means of a pressure difference,

curing said resin while between said first aircraft component and said barrier so as to form a shim on said first aircraft component,

separating said first aircraft component and said barrier after said resin has cured, and

joining said second aircraft component to said first aircraft component and said shim.

46. (Previously Presented) An aircraft structure including a first aircraft component connected to a second aircraft component, wherein a shim is interposed between the first and second components, the shim having been formed by performance of the method of claim 40.

47. (Previously Presented) An aircraft structure including a first aircraft component connected to a second aircraft component, wherein a shim is interposed between the first and second components, the shim having been formed by the use of the apparatus of claim 41.

48. (Previously Presented) An aircraft structure including a first aircraft component connected to a second aircraft component, wherein a shim is interposed between the first and second components, the shim having been formed by the use of the moulding tool of claim 44.